



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

SW

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,390	01/16/2002	Stephen F. Gass	SDT 319	2969
27630	7590	12/28/2004	EXAMINER	
SD3, LLC 22409 S.W. NEWLAND ROAD WILSONVILLE, OR 97070			ALIE, GHASSEM	
			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/053,390	GASS ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ghassem Alie	3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 August 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 2-23 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 24-29 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 January 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 09/16/02-12/09/04.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

***Election/Restrictions***

1. Applicant's election of Invention VIII (claims 24-28) on 08/20/04 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 1 and 29, which were not placed in any group, will be also examined with claims 24-28.

2. Claims 2-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friemann et al. (3,858,095), hereinafter Friemann, in view of Hugues et al. (5,081,406), hereinafter Hugues, and in further view of Hokodate et al. (6,150,826), hereinafter Hokodate. Regarding claim 1 and 29, Friemann teaches a method for detecting accidental contact between a person and a dangerous portion 5 of a woodworking machine 10 including steps of providing a first electrode electrically coupled to a person, providing a second electrode electrically coupled to the dangerous portion 5, and transmitting a signal by one of the first or

second electrodes and detecting whether the transmitted signal is received by the other of the first or second electrodes. If an operator should touch the band saw, or the dangerous portion, the capacitance C<sub>bm</sub>, which is connected to the band saw, is thereby changed and a voltage is transmitted from the bridge 3 to the amplifier circuit 4. The voltage is considered to be the signal which is transmitted by one of the first or second electrodes. See Figs. 1-6 and col. 3, lines 6-67 in Friemann. Friemann does not teach when the transmitted signal is received by the other of the first or the second electrode, the signal is sampled a plurality of times within 200 microseconds to determine if the signal has at least one predetermined characteristic indicative of contact between a person and the dangerous portion. Hugues teaches a detective mechanism that detects proximity of a person to a dangerous portion 18. Hugues also teaches a step of detecting other objects in proximity of the dangerous portion. Hugues's detection mechanism differentiates the presence of other objects in proximity of the dangerous portion 18 and a human hand. Hugues's safety system stops the operation of the saw 18 when a human hand approaches within a predetermined distance to the saw blade 18 and allows a fixed object to be placed near the saw blade without stopping the operation of the saw blade. See col. 5, lines 1-65 and col. 6, lines 1-62 in Hugues. Hugues does not teach the step of sampling within 200 microsecond to determine if the signal has at least one characteristics indicative of contact between a person and the dangerous portion. However, Hokodate teaches a distance detector 400 which has sampling circuit to sample the detection's output of the detecting circuit 8 a plurality of times within a predetermined of time to determine the actual distance between the two electrodes or workpiece 2 and a laser beam 4. See Figs. 1-16 and col. 11, lines 1-67 and col. 12, lines 1-64 in Hokodate. Hokodate does not expressly

teach that the samplings take place within 200 microseconds. However, Hokodate teaches that the samplings take place within a fixed period of time and within a desired range. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to manipulate the sampling period to a desired result, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would be obvious to a person of ordinary skill in the art to provide Friemann safety system with the detection mechanism as taught by Hugues and the sampling circuit as taught by Kokodate in order to improve the safety system and the stop the operation of the dangerous portion only when a human hand approaches the dangerous portion.

Regarding claim 24, Friemann as modified above teaches everything noted above including that the predetermined characteristic indicative of contact between a person and the dangerous portion distinguishes such contact from proximity between a person and the dangerous portion.

Regarding claim 25-28, Friemann as modified by Hokodate teaches that one predetermined characteristic indicative of contact between a person and the dangerous portion involves peak-to-peak amplitude, phase, a positive value, and a negative value. Hokodate teaches that the detection of distance between the two electrodes involves in-phase, maximum amplitude or pick-to-pick amplitude, and phase shifting which inherently involves negative and positive values.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to

Art Unit: 3724

applicant's disclosure.

Salmon (2,554,124), Reddi (6,366,099), Guetersloh (3,829,850), Bielski (6,492,802), Gaiis et al. (4,589,047), Suzuki et al. (6,376,939), Nonoyama et al. (6,257,061), and Zettler (4,048,886) teach a detecting mechanism having first and second electrodes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501.

The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**BOYER ASHLEY**  
**PRIMARY EXAMINER**

GA/ga

December 23, 2004